

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (Original) An isolated feline thyrotropin β -subunit polypeptide comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 1.
2. (Original) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence consists essentially of SEQ ID NO: 1.
3. (Original) The feline thyrotropin β -subunit polypeptide of claim 1, further comprising a signal sequence.
4. (Currently amended) The feline thyrotropin β -subunit polypeptide further comprising a signal sequence of claim 3, wherein the feline thyrotropin β -subunit polypeptide further comprising a signal sequence comprises an amino acid sequence with at least 80% identity to SEQ ID NO: 2.
5. (Currently amended) An isolated feline thyrotropin α -subunit polypeptide comprising an amino acid sequence with at least 80% 99% identity to SEQ ID NO: 3.
- 6-8. (Canceled)
9. (Original) An isolated feline thyrotropin yoked polypeptide comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 5.

10-12. (Cancelled)

13. (Currently amended) [[An]] The isolated feline thyrotropin yoked polypeptide of claim 9, consisting essentially of: the polypeptide comprising SEQ ID NO: 1 and SEQ ID NO: 3, wherein the polypeptide sequences are connected by a spacer peptide.

14-33. (Cancelled)

34. (Currently amended) A method of treating a mammal suspected of having hyperthyroidism, the method comprising:

administering to the mammal a composition comprising the feline thyrotropin heterodimer ~~comprising feline thyrotropin α -subunit and β -subunit polypeptide or a feline thyrotropin yoked polypeptide~~ of claim 1.

35. (Original) The method of claim 34, wherein the mammal is a cat.

36. (Original) The method of claim 34, wherein the method further comprises sensitizing the thyroid to increase the response of the thyroid to ablative treatment with radioiodide.

37. (Currently amended) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a feline thyrotropin heterodimer comprising a feline thyrotropin α -subunit and the β -subunit polypeptide of claim 1, or a feline thyrotropin yoked polypeptide of claim 9.

38. (Original) The pharmaceutical composition of claim 37, wherein the composition is formulated as a single unit dosage.

39-54. (Canceled).

55. (New) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence comprises at least 85% identity to SEQ ID NO: 1.

56. (New) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence comprises at least 90% identity to SEQ ID NO: 1.

57. (New) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence comprises at least 95% identity to SEQ ID NO: 1.

58. (New) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence comprises at least 99% identity to SEQ ID NO: 1.

59. (New) The feline thyrotropin β -subunit polypeptide of claim 1, wherein the amino acid sequence comprises SEQ ID NO: 1.

60. (New) The feline thyrotropin β -subunit polypeptide further comprising a signal sequence of claim 3, wherein the feline thyrotropin β -subunit polypeptide further comprising a signal sequence comprises SEQ ID NO: 2.

61. (New) An isolated thyrotropin comprising the feline thyrotropin β -subunit polypeptide of claim 1.

62. (New) The isolated thyrotropin of claim 61 further comprising a thyrotropin α -subunit polypeptide.

63. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises an amino acid sequence with at least 80% identity to SEQ ID NO: 3.
64. (New) The isolated thyrotropin of claim 63 wherein the feline thyrotropin β -subunit polypeptide comprises an amino acid sequence with at least 95% identity to SEQ ID NO: 1.
65. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises an amino acid sequence with at least 80% identity to SEQ ID NO: 4.
66. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises an amino acid sequence with at least 90% identity to SEQ ID NO: 3.
67. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises an amino acid sequence with at least 95% identity to SEQ ID NO: 3.
68. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises an amino acid sequence with at least 99% identity to SEQ ID NO: 3.
69. (New) The isolated thyrotropin of claim 62 wherein the thyrotropin α -subunit polypeptide comprises SEQ ID NO: 3.
70. (New) A polypeptide comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 1.
71. (New) The polypeptide of claim 70, the polypeptide comprising an amino acid sequence with at least 99% identity to SEQ ID NO: 1.

72. (New) The polypeptide of claim 70, the polypeptide comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 2.
73. (New) The polypeptide of claim 69 further comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 3.
74. (New) The polypeptide of claim 69 further comprising an amino acid sequence with at least 99% identity to SEQ ID NO: 3.
75. (New) The polypeptide of claim 73 wherein the amino acid sequence with at least 80% identity to SEQ ID NO: 1 is covalently yoked to the amino acid sequence with at least 80% identity to SEQ ID NO: 3 by a spacer peptide.
76. (New) The polypeptide of claim 73, the polypeptide comprising an amino acid sequence with at least 80% identity to SEQ ID NO: 5 or with at least 80% identity to SEQ ID NO: 6.
77. (New) The polypeptide of claim 76 comprising SEQ ID NO: 5 or comprising SEQ ID NO: 6.
78. (New) The polypeptide of claim 75 comprising the amino acid sequence of SEQ ID NO: 1 covalently yoked to the amino acid sequence of SEQ ID NO: 3 by a spacer peptide.
79. (New) The polypeptide of claim 75, wherein the 5' to 3' order is the amino acid sequence with at least 80% identity to SEQ ID NO: 1, the spacer peptide, followed by the amino acid sequence with at least 80% identity to SEQ ID NO: 3.
80. (New) The polypeptide of claim 75 wherein the spacer peptide is the chorionic

gonadotropin CTP spacer polypeptide (SEQ ID NO:13).

81. (New) A kit comprising the feline thyrotropin β -subunit polypeptide of claim 1 and packaging materials.
82. (New) A kit comprising the feline thyrotropin β -subunit polypeptide of claim 1 and a thyroid radiosensitizing agent.
83. (New) A kit comprising the feline thyrotropin β -subunit polypeptide of claim 1 and an anti-thyrotropin antibody.
84. (New) A composition comprising the feline thyrotropin β -subunit polypeptide of claim 1 and an adjuvant.
85. (New) A composition comprising the polypeptide of claim 70.
86. (New) A method of making an antibody, the method comprising immunizing an animal with the feline thyrotropin β -subunit polypeptide of claim 1.